

Abstract

A optical Biopsy method and an apparatus are used in the diagnosis of precancerous lesion for locating the place and determining the level of malignant tumor. The apparatus comprises light source (1, 10) a light channel system, an endoscope (21) and a circuit system. The light sources include an excited light (1) and a cold light source (10). The cold light source and the excited light in the light channel system go through the end of the light guide of the endoscope via optical fiber bundle and irradiate the tested living tissue (22). The white light image signal and the intrinsic fluorescence image signal reflected from the tested living tissue (22) are received by a weak fluorescence CCD (6) that tightly connects to the end of the endoscope (21) and then transmit to the circuit system via a signal wire (9) to produce the image in the display (17). The weak fluorescence signal reflected from the tested living tissue (22) is transmitted to the circuit system via the weak fluorescence fiber bundle (4) protruding from the forceps hole of the endoscope to produce the spectrum image (16).

